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at any given time ejective to a given consciousness must necessarily always remain ejective to that consciousness. There are sufficiently numerous cases in which the existence of other-consciousness seems to be directly verifiable in a way closely analogous to that in which the common inductive inference is verifiable. Something may be inferred as eject, and later presented immediately as object.

To be sure, there are limits to such verification. When Peter and Paul lie in the same bed, they remain Peter *and* Paul, and are ejective to each other. But when Peter and Paul lie in the same brain, we have sometimes Peter *and* Paul, and sometimes Peter-Paul. I think this is not without its significance for the doctrine of the eject.

However, I do not mean to base upon such facts the reasonableness and the certainty of the inference to other minds. If no such fact existed, I should still hold the inference to be rational and trustworthy. As I have said above, we can only discover what the word "rational" means by an examination into the actual use of the word; and I have further indicated that he who doubts whether we may make the inference to other minds, on the ground that other minds can not be perceived as can physical things, must admit that his doubt is a gratuitous one, and can never by any possibility be *proved* to have a foundation. Where both proof and disproof are, by hypothesis, wholly out of the question, we do not seem to have a problem before us at all. Certainly we are not in a position to complain that we lack proof of something. If men believe in the eject, and think that they have in some instances proof of its existence and in others no proof, it is clear that they are using the word "proof" in some sense that has a bearing upon the matter. It is not our duty to give the word a meaning of our own; it is, rather, our duty to find out what men mean by it in common life and in science.

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CONCRETE CONCEPTUAL SYNTHESIS

IN the theory of knowledge and in psychology we find a place given to perceptual synthesis and to abstract or general conceptual synthesis, but not, so far as I can discover, to concrete conceptual synthesis. By concept I understand a meaning marked off by a symbol, which has always a constant significance, though amid the varying contexts which the symbol at one time and another *suggests* it may be hard to say what is the meaning which it always has. If the meaning change then we have a new concept, not a changed one; for the new may be compared with the old concept.

A concrete concept, I understand, is a concept of a particular object. In the sentences "Charles I. was beheaded in London" and "I shall go to London next summer," there must be a constant meaning that enables me to conclude that I shall go to the city where Charles was beheaded. But it is only in the *sciences* of concrete conceptual synthesis, namely, history and geography, that it is possible to state approximately what the meaning of such a concrete concept is. Concrete conceptual synthesis is the joining of such concrete concepts, not under a generalization, as when we say that London, Leeds and other places visited are all cities of England, but in the concept of another particular object. Thus the concepts "London" and "Leeds" are in geography parts of the concept "England," of the concept "Great Britain," of the concept "Europe," etc.

In logic, in psychology, and in the theory of education I find no clear account given of this type of organized knowledge. This has resulted, I believe, in a serious and sufficiently obvious defect in educational practise. It seems that educators, following the lead of the logicians in this matter, have in their theories of education ignored an essential and obvious part of the process of acquiring knowledge. Hence I venture to conclude that in the works of English speaking logicians, at least, there is an appearance of neglecting the corresponding part or side of knowledge itself, or of confusing it with another part.

I will offer an illustration of concrete conceptual synthesis in which the particular objects are not things, but events. As I go into a village post-office, the postmaster with his assistant is loudly disputing with a villager concerning the delivery of the mail, on a point in which the village as a whole opposes the officials. In spite of their different motives the master and his assistant have the same purpose, and in respect of that purpose are proper subjects for comparison, abstraction and *generalization*. But the office and the village, in spite of their opposing purposes, are a unity in this respect, that the end toward which they actually are working is one; they are united, not through a common purpose, but by a single tendency. Their actions are parts of one and the same action. When the dispute is settled it will be settled for both at once. They move together in one direction, fighting each other, and little knowing, perhaps, what results they actually are bringing about in concert.

The recognition of all these points may occur as I listen, and form, indeed, according to current terminology, part of my percept, of my consciousness of particular material objects present to sense. If, however, the event should become the subject of investigation and record, if it should even enter the gates of history, it will there assume the character of a concept. For certain features will be marked as essential and constant, and those features will be *meant*, whenever the dispute is referred to. It is so with the Battle of Lexington; the historian says that the affair was *essentially* this and that. The name "Lexington" may call up, may suggest many other things that are not essential. But the concept "Battle of Lexington" has a certain meaning distinct from accidental suggestions. That meaning is determined by the nature of the history that is being written; it is not the same in an English or a universal history as in an American history.

In the body of history certain concepts have attained meanings which survive criticism, and are regarded as fact. They are universal in the sense that they are looked upon as things or events that might have been experienced by any one who was present, rather than as a mere individual memory of one or more persons who happened to be present. But they are in no way general, being the concepts of individuals or of particular events. They are none the less scientific, for they are essential parts of the web of past fact that the science of history has woven; they are organized knowledge. And, in like manner, the village of Lexington is part of the organized knowledge which is the subject-matter of geography. These two sciences, geography and history, I urge, are sciences of concrete, as distinguished from abstract or general, conceptual synthesis.

It would seem that the primary function of the geographer in times past was to describe the concrete existent world, not in terms of general laws, but as a particular fact made up of many particular facts which have their place in the world. From the traveler he learned what reactions the world offered in this part and in that to one who should go there from curiosity, or for trade, or for conquest, or with missionary zeal. And still, to-day, however interested we may be in the laws that are exemplified in the various parts of the world, our first interest is to know what is *there*. We seek a clear conception of the different parts of the world as a concrete whole, that we may know what reactions it will offer to our enterprise.

But the first great historical synthesis of which we know was written, not to speak of possible reactions, but of past actions;[1] not to inform us of a world alien to us and reacting to us, but of the world at one with us, acting with us. Herodotus says that he would inform the heroes of the Persian War in how great an action they had participated. He therefore would present the quarrel of Hellen and Mede from its beginning, in all its extent. The actions of the Greeks then living and listening to him formed part of this great action, and derived their significance from their place in it. History, therefore, like geography, seems primarily to be a concrete synthesis, a placing of definite concrete concepts in an organized concrete conceptual whole which is the material of the science of history.

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[1] I elaborate this position in my dissertation "The Concept Action in History and the Natural Sciences," Macmillan, 1905.

We have, then, it seems to me, two sciences of concrete conceptual synthesis, to be distinguished from such sciences as biology, geology, sociology and psychology, which have to do with abstract or general conceptual synthesis. But one may read through Mill's "Logic," Jevons's "Principles of Science," Hobhouse's "Theory of Knowledge," and Pearson's "Grammar of Science" without getting any account of such a distinction. We receive but a hint here and there, in Hobhouse's work, of a type of scientific conceptual synthesis radically distinct from that of generalization.

And if we turn to books on educational theory we find the same position assumed, the same ignoring of a second type of knowledge and science no less important than that of generalization. In their well-known and most effective little work "The Method of the Recitation," Drs. Charles and Frank McMurry assert that "eminent authorities on teaching now agree upon this law" that the acquisition of knowledge consists in proceeding from individual to general notions (p. 289). I have referred to the eminent authorities and have found no exception to urge. These educators appeal also to current psychology for support of their assertion that knowledge is essentially of this one type; and indeed, with the exception of the "psychology" Professor Dewey published nearly twenty years ago, there is, in English and American psychologies, so far as I can discover, no suggestion that knowledge is dual in character, and that there is a science of organized concepts of particular objects.

If one considers the process of acquiring knowledge, the distinct character of concrete conceptual synthesis, and its importance, become more evident. Even before he learns general truths there slowly grows in the child's mind a concrete synthesis of house and room, school and street, city, river and hill, countries, continents and oceans, all of them parts of that world which he is to know, which is the material, near or far removed, of his life. This concrete synthesis, in the course of school instruction, comes to deal, not with mere percepts and images, but with concepts, as the material of that synthesis takes clearer definition and becomes more thoroughly organized. Thus it is a matter of conceptual synthesis and of science, though not of generalization, that Bombay and Calcutta are cities on the two coast lines of India, distant so far from each other, knit by road and rail and telegraph, and related commercially and politically in certain concrete ways.

It is upon the basis of such a concrete synthesis, which is geographical in the old sense of that term, that the child can with comprehension build his knowledge of general truths, economic, geologic, etc. Before the child is capable of appreciating that Minneapolis is "the chief representative and type of this whole series of cities on the upper Mississippi River,"[2] he must master the more interesting fact that Minneapolis is *there*, related concretely in divers ways to other parts of the world.

The second type of concrete conceptual synthesis, the historical,[3] also precedes the appreciation of general truths. An important foundation for all historical synthesis is laid by securing from the child a correct narration of his experience, and by leading him to compare his account with those of others. Thus is built up the notion of a single great line of events, of things that actually occurred; which is known in different ways by the several children present, but which can be known in substantially the same way, at least in several respects, by all. Slowly the knowledge of the one reality that is potentially common to all knowledge broadens. The child becomes conversant with the stream of history; he builds up an intuition of the years within the whole of time.

A second basis for historical knowledge is laid in the stories of the heroes of the world and of its martyrs, which give comprehension of the actions that are possible. But historical synthesis proper begins for the child when he is invited to learn in what great actions his own small life has its place. To this end in our public schools he learns to conceive the activity of his country, the course of action which gives unity to its history, and which indeed constitutes its history and its life. In this greater action the agencies of men, of cities and states take part. While in our religious schools the child is led to see the place of his life and action in the progressive action of God's church and kingdom. Gradually a concrete synthesis is attained of the world's history, in which party strife, territorial expansion, industrial progress, intellectual advance and spiritual uplift somehow coexist, forming, in some measure and in some sense, a single action which we feel as the life of the world.

I think it is a fair criticism of present American education that in teaching geography it partly sacrifices the knowledge of the world as a concrete fact and as the material of man's life for the knowledge of those natural and social laws which prevail in the world, through obedience to which men make use of that material. In like manner, it sacrifices the knowledge of the life of our nation, as a concrete object that commands our love and service, for a knowledge of the laws that govern social life. Thus, in the work which I selected as typical, the aim suggested for the lesson on the Battle of King's Mountain is the generalization: "The common people, therefore, out of their own love of liberty and on account of their great courage and energy, contributed much to the success of the Revolutionary War."[4] It is not suggested that the place of that battle in the drama of the nation's awakening is, after all, the most important thing about it; in fact such an opinion is apparently barred by the principles which the book, in common with "eminent authorities on teaching," adopts.

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[2] "The Method of the Recitation," Macmillan, 1905, p. 23.

[3] The distinction that history is temporal, while geography is spatial, is, I think, not correct; for history is clearly spatial as well as temporal.

The ethical significance of the point I urge is surely very great. Mr. Bryce has made us familiar with the sincerity of the medieval conviction that men lived and moved in a greater life, the "mysterious unity" of the Holy Empire. Other times, other methods; the same lesson of solidarity has to be taught now; and it must be taught, not as a matter of faith, but of knowledge and science. But the existence of the greater unities of life and action can be known, not by perception, nor by generalization; it is a matter of concrete conceptual synthesis, of historical construction.

Again, social action requires knowledge of the individuals with whom we act. The application of generalizations in interpreting the conduct of another would carry us only a little way, and, perhaps, mislead. The study of the person's life as a concrete unity, a particular synthesis of particulars, reaching back into the years, and combining many phases of the soul's activity, is a more helpful and a truer method of study. Need it be said that our present theory of instruction emphasizes the former habit of dealing with facts, and even discourages the latter?

It would be most instructive to contrast the type of mind that deals in generalizations with the mind that grasps conceptual unities concretely. It is the latter alone which becomes acquainted with the great things of the earth, which can enter into the life of civilization, or of Christendom, or of his own nation, and of his own locality. He alone can form a clear idea of the singleness of action and life which may underlie the conflicts of the several parts of that life. In generalization the wider the application of the principle, the poorer are the particular objects to which it applies; but in concrete conceptual synthesis the most highly organized knowledge deals with the most remarkable and meaningful of objects.

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[4] "The Method of the Recitation," p. 281.

What, then, may we ask of the logician, that he may aid the educator and the moralist to appreciate duly this type of knowledge and science? The first obligation is to mark distinctly the characteristics of the sciences of geography and history in contrast with the character of all sciences of generalization. Here is work for which Kant in his third critique, Hegel in his "Logic" and his "Philosophy of History," Droysen in his "Principles of History" and Rickert in "Die Grenzen der Naturwissenschaftlichen Begriffsbildung" have prepared the ground.

The second is to lay down the principles that govern this type of knowledge and science, and to list the several types of concrete conceptual synthesis that are possible. Merely to illustrate what I mean, I suggest that in historical construction proper the synthesis of particulars is always in terms of the tendency that is common to them both; but community here differs from that found in the sciences of generalization, because the tendency that is said to be common to agencies is that *in which* they unite, and not that which exists *in each of them*. The common tendency that unites us as Americans in the destiny of the nation is greater than any tendency that can be found in us as mere individuals. Whereas the common tendency that biology or sociology may find in us all is but a poor part of the richness of each individual life. The common tendency which unites clerical and republican in the life of France is probably not to be found either in the republican or the clerical party; it exists through their strife, the hidden harmony their opposition creates.

Another principle is worth noting because it also marks a difference between the terminology current in the logic of generalization and that which would prevail in a logic of concrete conceptual construction. Every concept involves a distinction between the constant meaning of a symbol and the accidental associations which may occur with greater or less frequency. I mentioned the Battle of Lexington to illustrate this fact in the case of a concept of a particular object. Such a distinction involves stripping the object of some of the richness of perceptual or emotional life that may pertain to it. It is no part of the concept of the Battle of Lexington that one of the British officers had red hair and loved a maid in Staffordshire.

In the sciences of generalization a similar impoverishment takes place. In sociology, *e. g.*, the Battle of Lexington would be classed with those of Bennington and King's Mountain in respect of its origin and other characteristics, and outside such characteristics that battle would have no content for the sociologist, as such. As such sciences attain greater perfection the objects possess less and less content. The relations expressed in the general laws discovered possess the content. The widest generalizations are those that apply to the smallest particles of matter, or to biological elements and their specific functions.

The difference, then, to which I referred is this: that whereas in the sciences of generalization, the more highly organized the science the poorer the concept of any *object* to which the generalizations apply, on the other hand, in the sciences of concrete conceptual synthesis, the concept and definition of an object are the richer the more highly organized historical and geographical science becomes. Thus the concept of the Battle of Lexington is to the historian exceedingly rich in essential content, in spite of the abstraction from perceptual elements to which I have referred. It is not the relations, merely, in which the object stands that make it of importance. The participants are *conceived* as actually bringing, in their ways of thinking and ways of acting, the products of the conditions which resulted in the battle.

Other suggestions towards a logic of concrete conceptual science will be found in Rickert's work already mentioned; and I have brought together some points in my dissertation (*vide supra*), especially in Chapter VI. I am convinced that proper instruction in history and geography will not be given until the logician brings home to the educator the radical difference between the two classes of knowledge and science which is the theme of this essay.

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THE ANTI-REALISTIC "HOW?"

AGAINST natural realism as a theory of knowledge the critical query is raised, "How can consciousness perform such a self-transcending function?" One eminent exponent of another view epithetizes this as the "putty, magical faculty theory"; another declares emphatically that the consciousness relation "ought not to remain a pure mystery"; and there is a general philosophical sentiment that the fatal weakness of natural realism is its failure to "explain" perception. Restatements of the conception in vivid metaphor or plain Anglo-Saxon, all such expressions as "The mind actually *grasps* its object," or "The object is *as* the mind thinks it," result only in making the significant word or phrase a target for the insistent question, "What does this *mean?*"